

Some initial nitrogen, phosphorus, and algae references compiled by DEQ
(as of 8/27/2012)

Description	N (mg/L)	TP (mg/L)	Reference
Mean benthic chlorophyll a <50 mg/ m ²	0.47	0.055	Dodds et al 1997
Mean benthic chlorophyll a <50 mg/ m ²	0.25	0.021	Lohman et al. 1992
Max benthic chlorophyll a < 200 mg/ m ²	3.0	0.415	Dodds et al 1997
Planktonic stream chlorophyll < 8 ug/L	0.29	0.042	Van Nieuwenhuyse and Jones 1996 using Redfield ratio (Harris 1986)
Tri-State Implementation Council, Clark Fork Voluntary Nutrient Reduction Program	0.30	0.020	
Oligotrophic: suspended chlorophyll a 10 ug/L & benthic chlorophyll a < 20 mg/m ²	<0.7	<0.025	Smith et al. 1999 & Dodds et al 1998
Mesotrophic: suspended chlorophyll a 10-30 ug/L & benthic chlorophyll a 20-70 mg/m ²	0.700 – 1.5	0.025 – 0.075	Smith et al. 1999 & Dodds et al 1998
Eutrophic: suspended chlorophyll a > 30 ug/L & benthic chlorophyll a >70 mg/m ²	>1.5	> 0.075	Smith et al. 1999 & Dodds et al 1998
Mean benthic algae (nuisance level) < 100 mg/m ²	<0.350	<0.030	Dodds et al. 1997

Dodds, W. K., J. R. Jones and E. B. Welch. 1998. Suggested classification for stream trophic state: distributions of temperate stream types by chlorophyll, total N and P. *Water Research* 32:1455-1462.

Dodds, W. K., V. H. Smith and B. Zander. 1997. Developing nutrient targets to control benthic chlorophyll levels in streams: A case study of the Clark Fork River. *Water Research* 31:1738-1750.

Lohman, K., J.R. Jones and B.D. Perkins. 1992. Effects of Nutrient Enrichment and Flood Frequency on Periphyton Biomass in Northern Ozark Streams. *Canadian Journal of Fisheries and Aquatic Sciences*. 49(6): 1198-1205

Van Nieuwenhuyse, E.E., and J.R. Jones. 1996. Phosphorus-chlorophyll relationship in temperate streams and its variation with stream catchment area. *Canadian Journal of Fisheries and Aquatic Sciences*. 53: 99-105

Harris, G. P. 1986. *Phytoplankton ecology: Structure, function and fluctuations*. Chapman and Hall. 370pp.